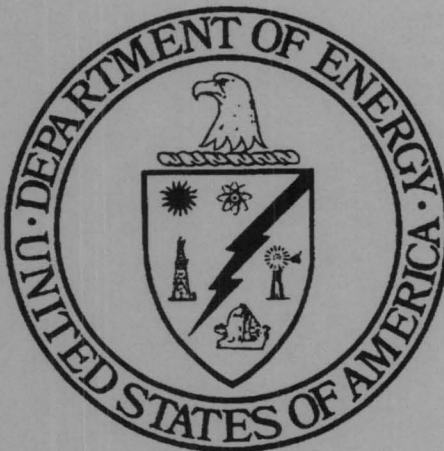


Sandia National Laboratories

**PROPOSAL FOR ADMINISTRATIVE
NO FURTHER ACTION
ENVIRONMENTAL RESTORATION
SITE 25, BURIAL SITE (SOUTH OF TA-I)
OPERABLE UNIT 1302**

August 1994

Environmental
Restoration
Project



United States Department of Energy
Albuquerque Operations Office

**PROPOSAL FOR
ADMINISTRATIVE
NO FURTHER ACTION**

**SITE 25, Burial Site (South of TA-I)
OU 1302**

SANDIA NATIONAL LABORATORIES/NEW MEXICO

1.0 INTRODUCTION

Sandia National Laboratories/New Mexico (SNL/NM) is proposing an administrative No Further Action (NFA) decision for Environmental Restoration (ER) Site 25, Burial Site (South of Technical Area (TA)-I), Operating Unit (OU) 1302.

This area was designated an ER site based on an interview with an unidentified employee in 1985 who claimed that a building used for explosives research was demolished and placed in a trench somewhere south of TA-I. No information has been found to substantiate this claim. All avenues were exhausted trying to locate supporting data and none could be found. Therefore, an NFA determination is requested for this site.

2.0 HISTORY OF UNIT

ER Site 25 has not been located but was mentioned during the Comprehensive Environmental Assessment and Response Program (CEARP) Phase 1 site interviews. It was said to be along the southern fence line of TA-I. The CEARP report indicates that during the interview process, "a SNL/NM employee stated that an old building used for explosives research was demolished and placed in a trench along the fence south of TA-I (Interviews 1985). The exact location of this site is not known." (DOE 1987).

The reliability of the above statement is questionable for the following five reasons. First, a thorough review of the original 1984 and 1985 CEARP interview notes was performed to identify the source of the statement and to verify the reference to this site (Interviews 1985). However, the original reference to this site could not be established. No information could be found regarding the name of the SNL/NM person who made the statement, the building number, contaminants which might be associated with the building rubble, dates of demolition and burial, nor location of the burial site. Second, historical accounts reveal that little explosives work was conducted within TA-I. The majority of the SNL/NM explosives work was conducted in TA-II, south of TA-I (Alexander 1963). Third, general practice at SNL/NM in the past was to dispose of uncontaminated materials (such as demolished building rubble) in the Kirtland Air Force Base (KAFB) landfill, with contaminated materials being disposed at the chemical waste or radioactive waste landfills in TA-III or in the landfill located in TA-II (SNL/NM 1993; SNL/NM 1994). Fourth, no personnel interviewed during the Resource Conservation and Recovery Act (RCRA) Facilities Investigation Work Plan background information collection process had any recollection of the Burial Site (South of TA-I) or of any demolished explosives-testing buildings in TA-I. Fifth, no written reports, memos, letters, or drawings of the Burial Site (South of TA-I) or of an explosives-testing building in TA-I could be found in SNL/NM archives.

3.0 EVALUATION OF RELEVANT EVIDENCE

Information contained in the CEARP indicates that SNL/NM personnel stated that an old explosives research building was demolished and placed in a trench along the fence south of TA-I. Evidence suggests that there was no demolished explosives-testing building buried at the referenced site and that this site was improperly designated as an ER Site.

An effort was made recently to determine the existence of this burial site. This effort consisted of an investigation of air photos taken at 3- to 6- year intervals (Attachment 1). The study area for this investigation was bounded on the north by Hardin Boulevard, to the west by an extension of the KAFB-SNL/NM property line, and to the east by the Tijeras Arroyo. This study found 12 candidate areas (Attachment 1; Figure 1.1) based on criteria discussed in the letter report.

Based on the findings of the air photo investigation, site visits were conducted to review the 12 candidate areas identified in the air photos (Attachment 2). All 12 candidate areas were found to have alternative explanations, and no evidence of a burial site could be verified.

4.0 CONCLUSION

Due to the lack of existing data and former SNL/NM personnel being unaware of the existence of this site, a no further action determination is proposed. Based upon the evidence cited above, there is no potential for a release of hazardous waste (including hazardous constituents) which may pose a threat to human health or the environment.

5.0 REFERENCES

Alexander, F.C. 1963. "History of Sandia Corporation through Fiscal Year 1963" Sandia National Laboratories, New Mexico Internal Document December 1, 1963.

Interviews, "Interviews with current and retired Sandia Corporation personnel, conducted September and October 1985 by personnel from Los Alamos National Laboratory." As cited in the Draft Comprehensive Environmental Assessment and Response Program, Phase I: Installation Assessment, September 1987.

SNL/NM 1993. Technical Areas III and V RCRA Facility Investigation Work Plan [Draft], Environmental Restoration Program, Sandia National Laboratories, Albuquerque, New Mexico, March 1993.

SNL/NM 1994. Technical Area II RCRA Facility Investigation Work Plan [Draft], Environmental Restoration Program, Sandia National Laboratories, Albuquerque, New Mexico, June 1994.

U.S. Department of Energy, "Draft Comprehensive Environmental Assessment and Response Program (CEARP), Phase I: Installation Assessment," September 1987.

6.0 LIST OF ATTACHMENTS

Attachment 1

Roy F. Weston, Inc., Letter Report, June 30, 1994

Attachment 2

SNL/NM, Memo, July 5, 1994

Attachment 1



6501 AMERICAS PARKWAY, N.E.
SUITE 800
ALBUQUERQUE, NM 87110-1517
505-884-5050 • FAX: 505-884-5388

30 June 1994

Sandia National Laboratories, New Mexico
Attention: Mr. David Miller
Department 7585
P.O. Box 5800
Albuquerque, New Mexico 87185

RE: The Sandia Photo Interpretation for ER Site 25

Dear Mr. Miller:

Attached is a brief summary of the photo interpretation effort conducted to locate the possible existence of ER Site 25. This report presents observations of possible candidate sites.

In this summary, areas 1 through 12 are specifically described in square feet. A full description of the procedures and methodologies used to conduct this interpretation also will be included in the TA-I ADS 1302 Report.

If you have any questions or comments, please contact Darcel Sandland at 884-5050 or Joe Spollen, technical GIS lead, in West Chester, Pennsylvania, 610-701-7540.

Sincerely,

ROY F. WESTON, INC.

Darcel Sandland
Project Manager



ATTACHMENT A

1. INTRODUCTION

The Environmental Restoration (ER) Project at Sandia National Laboratories New Mexico (SNL/NM) has the task, under the Hazardous and Solid Waste Amendments (HSWA) Module of SNL's Part B RCRA permit, of assessing and remediating sites of past waste releases.

This report describes photo interpretation work conducted to evaluate the impacts of historical activities at various locations at SNL/NM observed from aerial photos of the area being assessed under ADS 1302. This area includes ER sites in and around Technical Area 1 (TA-I) and TA-IV.

ADS 1302 includes 15 potential release sites (ER Sites) located within approximately 1 square mile in and adjacent to TA-I. TA-I is dedicated primarily to the design, research, and development of weapon systems, as well as limited production of weapon system components and energy programs. It also includes the main library and offices, laboratories, and shops used by administrative and technical staff.

This report focuses specifically on a review of aerial photography taken at approximately 5-year intervals to search for evidence of the location of ER Site 25, "Burial Site (South of TA-I)".

The map shown in this report was generated using ARC/INFO Geographic Information Systems (GIS) software, using base digital files provided by SNL/NM's GIS group. Observations and interpretations of the aerial photography were input into GIS coverages and were also used to generate the map.

2. OBJECTIVES

The overall objective of this effort is to provide SNL with a summary of relevant construction and land surface changes that can be readily observed from aerial photos to aid in the task of locating, assessing, and remediating sites of past releases to the environment. In addition, this report assesses observable changes in property and physical feature boundaries and other relevant historical changes that may indicate the occurrence of past contaminant releases to the environment.

The photo interpretation work described in this letter report focuses specifically on a review of a set of aerial photographs taken at approximately 5-year intervals to search for evidence of the location of ER Site 25, "Burial Site (South of TA-I)"

Information in the historical files indicates the possibility of a site containing debris from a building that housed high explosives materials. A primary objective of the photo interpretation effort was to look for evidence, if any, that indicates the possible location of such a burial site south of TA-I.

The study area interpreted for this initiative is bounded on the north by TA-I, to the west by an extension of the Kirtland Air Force Base-SNL/NM property line, and to the south and east by the Tijeras Arroyo.

The photo interpretation team reviewed nine sets of historical photos covering the years 1951 to 1982 to look for evidence of a trench or disturbed area large enough to contain a buried building. Observable evidence of ground surface discoloration, piles of rubble or fill, or large excavations were sought during the interpretation.

It is important to note that this study evaluated aerial photography taken at 3- to 6-year intervals. Short-term changes in the landscape may have occurred during the time period between the years aerial photography was available. Any such short-term changes will not be visible in the "snapshot" of time studied.

GIS technology played an important role in the process of preparing this report. All observations identified during the photo interpretation process have been incorporated into digital files compatible with SNL/NM's ARC/INFO GIS software environment.

3. INTERPRETATION CATEGORIES AND CRITERIA

Based on an initial exploratory review of the aerial photos, a set of objective criteria were developed to describe and classify observable changes in surface features from one time period to the next. Field verification to obtain more information at the current site of an observation were not performed during the photo interpretation effort, and a conclusive explanation of observations at a given location is beyond the scope of this report.

Several specific criteria were used to identify and classify an area as a "candidate area" for the possible existence of ER Site 25. The area

- must be within the study area south of TA-I,
- must be large enough to contain a buried building,
- may have evidence of excavated areas,
- may have piles of fill material,
- may have proximity to paths or roads, and
- may have areas of discoloration.

4. ER SITE 25: BURIAL SITE (SOUTH OF TA-I) OBSERVATIONS

Following the photo interpretation process, twelve areas were identified as candidate areas for the possible location of Site 25. These locations are referenced by number on Figure 1.1 and are described in the following paragraphs.

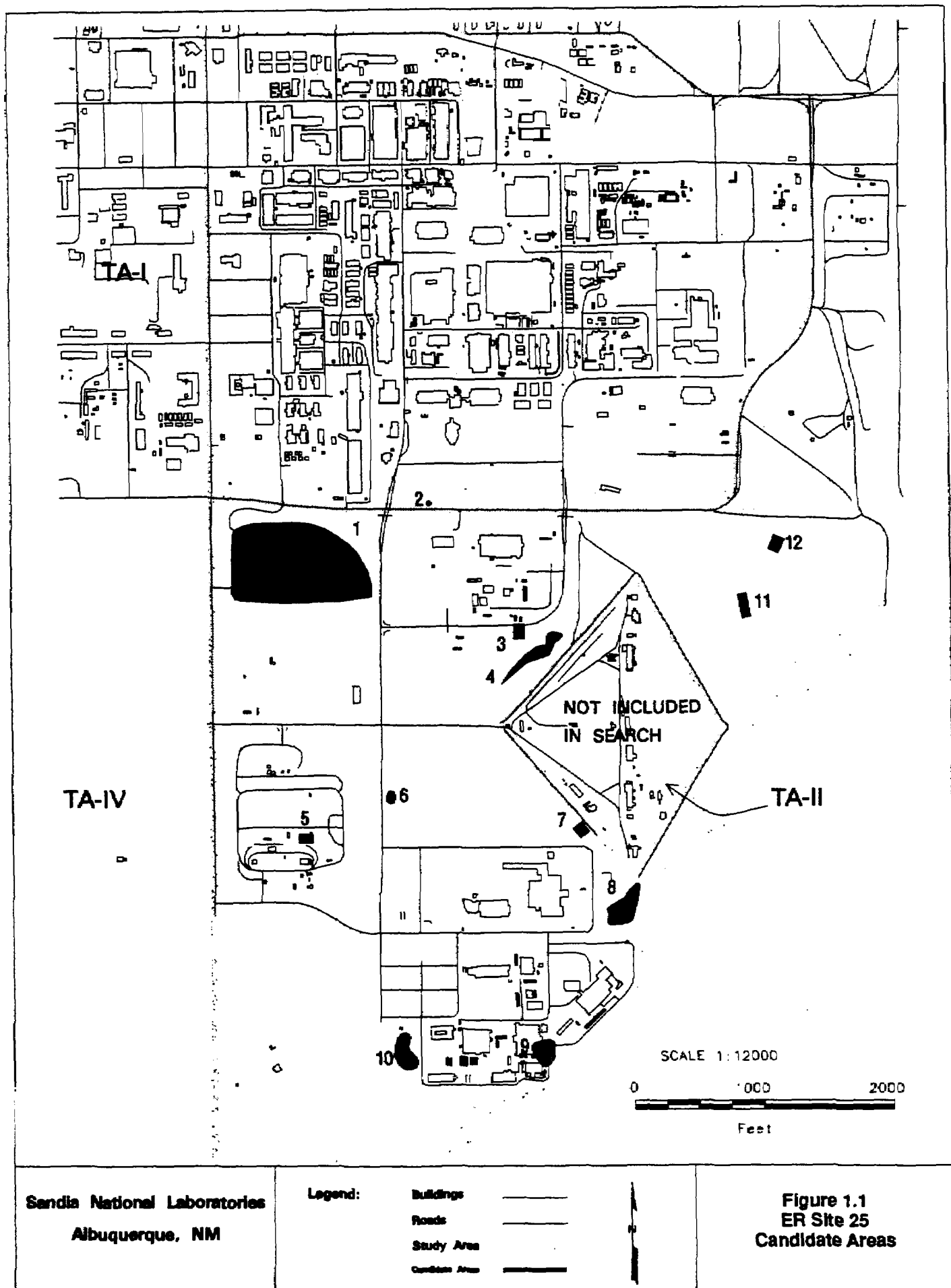
Area 1 - Present from 1959 through 1982. This is a large disturbed area (578,968 square feet [sq ft]) that appears to be fill located south of ER Site 190. The striped vegetation pattern is obscured. Information received from SNL/NM staff indicates this pattern was created by the War Reclamation Airplane Salvage project. This area was desert that was graded for airplane storage and dismantlement. Precious metals were reclaimed from the airplanes. There is a large raised area to the north and a smaller area to the southeast separated by a drainage channel and vegetation. Piles of fill material are visible in the years 1959 and 1973. An aboveground storage tank is present in the northwest corner of this area beginning in 1973.

Area 2 - Present in 1964. This is a small circular depression (1,243 sq ft) resembling a pit of some kind along the southern edge of TA-I. There is no sign of excavated material in the area. Nearby to the south is a smaller white-colored rectangle. A white dot is visible in 1976 in the same location as the circular feature but resolution is not adequate to identify it as a depression. The feature is gone by 1973.

Area 3 - Present from 1951 through 1982. This light-colored feature (8,775 sq ft) northwest of TA-II appears to be an intersection of two linear features. In 1951, both linear features are clearly visible. As time passes, vegetation obscures all but the intersection in question. In 1967, a small structure or shrub is visible at the site. By 1973, the area is less defined and is barely visible by 1982.

Area 4 - Present in 1976. This is an irregular-shaped lumpy mound (35,104 sq ft) along the drainage channel northwest of TA-II. It is oriented northeast to southwest, and is less well defined and fades into the surrounding area at the southern end. There is one, crisp, north-south linear feature at the northern end. In 1979, the mound itself is not visible, but the area is covered in dark vegetation. The north-south linear feature is still present in 1979.

Area 5 - Present from 1964 through 1973. This is a well-defined, light-colored rectangular area (7,500 sq ft) adjacent to a road leading to two old building foundations. There are several dark linear features scattered in the area, which may be utility poles lying on the ground. This rectangular feature is visible in 1967; is barely visible in 1973, 1976, and 1979; and is obscured by 1982.



Area 6 - Present from 1951 through 1979. This is a well-defined, light-colored oval area (5,816 sq ft) next to a drainage ditch and fence west of TA-II. In 1951, there appears to be a small trench at the north end of this feature that slopes down towards the oval. The oval is less defined in 1954 and 1959. In 1964 through 1973, there appears to be a small rectangular dark spot at the northern end. In 1976, the fence (or raised feature covered in vegetation) nearby is much wider and more pronounced. The oval has a less well-defined edge in 1979 and the feature is obscured by construction of a new drainage channel by 1982.

Area 7 - Present from 1964 to 1973. This is a well-defined, light-colored square area (7,886 sq ft) adjacent to the southwest fenceline of TA-II. It appears to be a shallow excavation. It is bisected by a road that curves back towards the fence on both sides. This square feature is barely visible in 1967 and 1973, and is obscured by 1976. Comments received from SNL/NM GIS staff describe this area as being related to the known ER Site 165, a drain field installed during this general time period.

Area 8 - Present from 1959 through 1973. This area (44,894 sq ft) is located at the southern tip of TA-II. Fill material is present in 1959. From 1964 through 1973, a large trench surrounded by piles of fill is present. Comments received from SNL/NM GIS staff indicate that this is ER Site 45.

Area 9 - Present in 1979. This is an area (28,455 sq ft) of fill material at the edge of the mesa at the southeastern end of TA-IV. It is located near several buildings. A new building exists at this location by 1982.

Area 10 - Present in 1982. This is an area (34,276 sq ft) of fill material at the southwestern edge of TA-V. Many new buildings are present in the area by 1986.

Area 11 - Present in 1964. This is a slightly raised, light-colored, oblong area (12,388 sq ft) northeast of TA-II. It is bisected by an old road or trail. It appears to be surrounded by dark vegetation, particularly to the south and east. This feature is not visible by 1967. According to SNL/NM staff, a building currently occupies this area.

Area 12 - Present from 1964 through 1982. This is a flat, light-colored rectangular area (9,747 sq ft) with poorly defined edges northeast of TA-II. It is located in the center of a diamond formed by old and new roads. In 1967 and 1973, the southern third is covered by vegetation. The area is even less well defined in 1976. By 1979, the light color has disappeared. The feature is barely visible in 1979 and 1982. According to SNL/NM GIS staff, a building currently occupies this area.


Attachment 2

Sandia National Laboratories

Albuquerque, New Mexico 87185-1347

date: July 5, 1994

to: David Miller, MS-1347 (7582)

from: Michael F. Skelly (WESTON)


subject: ER Site 25 — Site Visit Trip Report

This memo summarizes the findings of site visits conducted on June 7 and July 1, 1994, to sites identified as candidate areas in the ER Site 25 Air Photo Interpretation. The site visits were performed by David Miller (7582) and Michael Skelly (WESTON). The purpose of the visits was to inspect the 12 candidate areas identified by a review of air photo sets from 1951 to 1982.

OBSERVATIONS

During the site visit, we inspected 16 candidate areas initially identified by the air photo interpreters. A few of the sites did not meet the criteria of a candidate area. For example, further investigation of one site revealed a manhole installation area. Subsequently the site list was adjusted and the sites renumbered. The candidate area numbers (1 through 12) discussed here are from the most current list and reflect the names used in the June 29 letter report from WESTON. Attached is Figure 1-1 which identifies the candidate sites. The findings of the site visit are as follows:

Candidate Area 1 — This site is on Kirtland Air Force Base (KAFB) property and is apparently a construction materials staging area. It currently contains buildings, heavy construction equipment, and piles of construction materials (asphalt, crushed rock, and sand). This area has historically contained construction materials, which suggests that the fill materials identified in the air photos are not related to ER Site 25. Any buried building debris associated with ER Site 25 would have been discovered and reported during the construction of the buildings presently at this location.

Candidate Area 2 — A storm water collection area consisting of multiple yard inlets now exists at this site. This suggests that the circular depression identified in the air photos was an area of natural accumulation of surface water before the storm water system was installed. Any buried building debris associated with ER Site 25 would have been discovered and reported during the construction of the present storm water system.

Candidate Area 3 — This site appears to be at the intersection of two runways associated with the airplane salvaging operations conducted in the late 1940s and is apparently a storm water collection area. Currently, there are piles of soil and a small water-line manhole at this location. Any buried building debris associated with ER Site 25 would have been discovered and reported during the construction of this water line.

Exceptional Service in the National Interest

Candidate Area 4 — The old storm water channel went through this site. The soil piles were probably associated with the construction of the new storm water diversion channel. The piles are no longer there and the ground was leveled after the channel was rerouted to its present location.

Candidate Area 5 — This site is now occupied by buildings associated with the technical onsite inspection program. This program is conducted by the U.S. Air Force on KAFB property and is not an area under SNL/NM control. Any buried building debris associated with ER Site 25 would have been discovered and reported during the construction of the buildings presently at this location.

Candidate Area 6 — This site is currently occupied by a storm channel 6 ft deep x 30 to 40 ft wide. There is currently no building debris exposed in the channel. Any buried building debris associated with ER Site 25 would have been discovered and reported during the construction of the present storm water channel.

Candidate Area 7 — There is no visible sign of this site. The soil disturbance is probably associated with the construction of the buildings and bunkers in TA-II, or possibly related to ER Site 165. Approximately 30 ft southeast of the site, a storm drain discharge line and a manhole cross the site. Any buried building debris possibly associated with ER Site 25 would have been discovered and reported during the construction of this storm drain line.

Candidate Area 8 — This area is ER Site 45, Liquid Discharge (Behind TA-IV), and is being investigated under ADS 1309. This site is not related to ER Site 25.

Candidate Area 9 — This site is now occupied by buildings in TA-IV. Any buried building debris associated with ER Site 25 would have been discovered and reported during the construction of the buildings presently at this location.

Candidate Area 10 — The site is currently a parking lot. The piles noted in the air photos were apparently soil accumulation areas associated with construction of buildings in TA-IV. At the completion of the TA-IV construction, the area was graded and paved.

Candidate Area 11 — This site is in an area of recently constructed buildings. If buried building debris associated with ER Site 25 was present, it would have been discovered during the excavation for the new Explosive Component Facility and reported during construction.

Candidate Area 12 — This site is in an area of recently constructed buildings. If buried building debris associated with ER Site 25 was present, it would have been discovered during the excavation for the new Explosive Component Facility and reported during construction.

RECOMMENDATIONS

Based on the results of the air photo interpretation and the site visits, it is suggested that ER Site 25, Burial Site (South of TA-I), does not exist. It is recommended that ER Site 25 be proposed for No Further Action.

Attachment: Figure 1.1, ER Site 25 Candidate Areas

MFS:WESTON:mfs

Copy to:

MS-1347 W. Cox, 7581

MS-1347 F. Nimick, 7582

MS-1347 D. Miller, 7582

MS-1347 J. Holsinger (ESI)

MS-1347 M. Worth (IT)

MS-1347 M. Skelly (WESTON)

MS-1347 Day File, 7582

MS-1309 EO Records Center ER/1302 025/COR\

